**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Michael Childs et al.

Title: SYSTEMS, FUNCTIONAL DATA, AND METHODS TO PACK N-DIMENSIONAL DATA

Docket No.: 1528.005US1 Serial No.: 10/086,370
Filed: February 28, 2002 Due Date: August 22, 2005
Examiner: Ronnie M. Mancho Group Art Unit: 3663

**MS Appeal Brief - Patents**
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

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SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
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By: Joseph P. Mehrle
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CANDIS BRENDING
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PATENT

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In re Application of: Michael Childs et al. Examiner: Ronnie M. Mancho

Serial No.: 10/086,370 Group Art Unit: 3663

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For: SYSTEMS, FUNCTIONAL DATA, AND METHODS TO PACK N-DIMENSIONAL DATA

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# APPEAL BRIEF UNDER 37 CFR § 41.37

Mail Stop Appeal Brief- Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Respectfully submitted,

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**PATENT**

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Mail Stop Appeal Brief- Patents
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Alexandria, VA 22313-1450

Sir:

The Appeal Brief is presented in support of the Notice of Appeal to the Board of Patent Appeals and Interferences, filed on June 22, 2005, from the Final Rejection of claims 1-12 and 25-32 of the above-identified application, as set forth in the Final Office Action mailed on April 22, 2005.

A check in the amount of $500.00, which represents the requisite fee set forth in 37 C.F.R. § 41.2(b)(2), is enclosed. The Commissioner of Patents and Trademarks is hereby authorized to charge any other required fees to Deposit Account No. 19-0743.

The Appellants respectfully request consideration and reversal of the Examiner's rejections of pending claims.

## 1. REAL PARTY IN INTEREST

The real party in interest of the above-captioned patent application is the assignee, GARMIN, LTD.

## 2. RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences known to the Appellant that will have a bearing on the Board's decision in the present appeal.

## 3. STATUS OF THE CLAIMS

The present application was filed on February 28, 2002 with claims 1-24. A first non-final office action was received September 15, 2003. In response to that first Office Action, a response was filed on December 15, 2003 that cancelled claims 13-24 and added new claims 25-32. From this point forward claims 1-12 and 25-32 were prosecuted. A final office action was received May 7, 2004 and an advisory action was received on September 14, 2004. A Request for Continued Examination (RCE) was filed on October 5, 2004. Another office action was received on October 21, 2004 and another final office action was received on April 22, 2005. Appellant's response to the April 22, 2005 final office action was filed on June 22, 2005 and included a Notice of Appeal and did not include any amendments to the claims. A final advisory action was received on August 12, 2005.

Claims 1-12 and 25-32 stand twice rejected, remain pending, and are the subject of the present appeal. There have been no claims allowed and claims 13-24 have been cancelled.

## 4. STATUS OF AMENDMENTS

No amendments have been made subsequent to the Final Office Action dated April 22, 2005.

## 5. SUMMARY OF CLAIMED SUBJECT MATTER

Some aspects of the present inventive subject matter include, but are not limited to, navigation devices and systems for packing and unpacking n-dimensional data.

An example navigation device, as illustrated in FIG. 6, includes a processor 630, memory 620, and a display 440. The device 400 uses the memory 430 in cooperation with the processor 610 to compress a plurality of coordinate data 640 into reduced sizes and associate at least a portion of activation data 650 with each coordinate data 640. Each coordinate data 640 has three or more dimensions 660 and at least a portion of the coordinate data 640 is dynamically communicated to the display 610. Page 16, lines 9-16.

In another aspect, an example navigation system for packing and unpacking n-dimensional data is illustrated in FIG. 5. The system 500 includes a mass storage device 512, a server 502, and a navigation device 516. The mass storage device 512 is adapted to store navigation data. Page 13, lines 2-3. The server 502 is adapted to communicate with the mass storage device 512. Page 13, lines 1-2. The navigation device 516 is adapted to communicate with and retrieve navigation data from the server 502 via a communication channel 518. Page 13, lines 6-8. The navigation device 516 includes a processor 504 in communication with a memory 506. The processor 504 and the memory 506 cooperate to compress at least three dimensional data into reduced sizes, and the three dimensional data is associated with the navigation data and activation data. Page 13, lines 17-24; Page 15, lines 22 through Page 16 line 8.

In still another aspect, another example navigation device for packing and unpacking n-dimensional data is illustrated in FIGS. 4A, 4B, 5, and 7. The navigational device 730 includes a memory 738, a display 440, a processor 736, and a Global Positioning Satellite (GPS) receiver 450. The processor 736 cooperates with the memory 738 to compress navigation data 734 having three or more dimensions and the navigation data 734 includes control data and coordinate data. Page 19, lines 4-10. The GPS receiver 450 cooperates with the processor 738 and provides processor specific values for

coordinate data. The processor matches the values with portions of the compressed navigation data 734 using the control data and dynamically decompresses those matched portions into larger and original sizes and then communicates the decompressed matched portions to the display 440. Page 19, lines 11-18.

This summary does not provide an exhaustive or exclusive view of the present subject matter, and Appellant refers to the appended claims and its legal equivalents for a complete statement of the invention.

## 6. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A. Claims 1-2, 6-12, and 25-32 were rejected under 35 USC § 102(e) as being anticipated by Ito *et al.* (U.S. Patent No. 6,484,093).

B. Claims 3-5 were rejected under 35 USC § 103(a) as being unpatentable over Ito et al. in view of Robinson *et al.* (U.S. Patent No. 5,995,970).

## 7. ARGUMENT

### A) The Applicable Law under 35 U.S.C. §102(b)

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. M.P.E.P § 2131. To anticipate a claim, a reference must disclose every element of the challenged claim and enable one skilled in the art to make the anticipating subject matter. PPG Industries, Inc. V. Guardian Industries Corp., 75 F.3d 1558, 37 USPQ2d 1618 (Fed. Cir. 1996). The identical invention must be shown in as complete detail as is contained in the claim. Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

### B) Reference Cited

**Ito** discloses techniques for communicating route guidance to mobile units. The mobile units include road data. Furthermore, the mobile units communicate with an information center for acquiring updated road data and route guidance. A drive route, which is associated with route guidance, is divided into route segments. Ito, FIG. 4A and 4B; col. 10, lines 5-7. What is contained in each route segment is depicted in FIG. 4B. Some things included in each route segment are a header, crossing information, road information, *etc.* (herein after "metadata"). Ito, col. 10 lines 9-11. A route is divided into segments so that the mobile units do not have to have each segment of the route to guide a driver at any particular point in time; rather, each segment can be acquired as needed from the information center by the mobile units. Ito, col. 10, lines 11-39.

### C) The Rejections under 35 U.S.C. § 102(e):

Independent claims 1, 9, and 25 were rejected as being anticipated by Ito. The Examiner has continued to assert that the Ito reference teaches data compression and decompression. The Examiner has asserted that it is the Appellant's responsibility to explain why Ito fails to teach compression even though the Examiner has been unable to explain how Ito in fact teaches compression in the first instance. Appellant has argued

that this is improper logic and that the Appellant cannot be forced to prove a negative and that the Examiner has not demonstrated that Ito does in fact imply compression.

The entire argument asserted by the Examiner rests on FIGS. 4A and 4B of the Ito reference. It is asserted by the Examiner that it can be seen from these two figures that data compression and decompression occurs in Ito. The entire discussion of these figures can be found in column 10 lines 5-39.

Ito divides route guidance into segments and then provides the segments as need or requested by a mobile unit. It appears that this data division is assumed to be compression by the Examiner. This is in fact not the case. A route is not compressed at all in Ito. The route is divided into discrete segments and each segment includes a plurality of additional metadata. That metadata is depicted in FIG. 4B in an exploded view for purposes of illustration. In fact, the size of the original route data is increased by the introduction of metadata (headers, *etc.*) that are depicted in FIG. 4B and described in column 10 of Ito.

A Google® search on "data compression" yields a plethora of definitions all of which comport with the previous arguments asserted by the Appellant and that is that "compression" entails reducing the size of an original data file.

In Ito the original data file is the route generated by the information center. The size of the route is not decreased by any teaching taught or suggested in Ito. If a route had an original size of N in Ito, then that route would have a size of N + X after it was divided into discreet segments and the metadata was added. This is not a decrease in size, it is an increase in size and cannot be said to be compression.

The approach in Ito is not one of compression; it is one of distribution and communication. Ito elects to provide a technique for dividing a route into discreet segments, each divided segment is provided to the mobile units on an as needed or requested basis. Just because the distribution of the original route data is managed in a piecemeal fashion does not imply that the route data is in fact compressed, because it is not compressed. The route data is increased in size and managed by an information center where it is selectively distributed in segments to the mobile units. A segment of a

route is not a form of compression because that segment is actually larger with the added metadata than its corresponding portion included within the route.

It appears to Appellant's that the Examiner wants to assert that streaming is a form of compression and Appellant disagrees with this, the two are different techniques, which are sometimes used in conjunction with one another. Ito discloses a form of streaming but makes no mention or even a hint of a teaching related to compression. Ito relies on enhanced route segments having added information that increase the sizes of the segments. The added information is needed by the mobile units to identify which portions of the route it has and which portions of the route it does not have and still needs.

Appellant asserts that Ito does not teach compression and does not suggest any teaching of compression. Moreover, Appellant's independent claim 1 recites a limitation of compressing coordinate data into reduced sizes; independent claim 9 recites a limitation of compressing dimensional data into reduced sizes; and independent claim 25 recites a limitation of compressed navigation data. Therefore, since Ito fails to teach or suggest compression and since these limitations are positively recited in Appellant's independent claims. The Appellant respectfully request that the Board overturn the rejections of record with respect to the independent claims and allow claims 1, 9, and 25 and their corresponding dependent claims, because each and every element of Appellant's independent claims are not taught or suggested in the Ito reference as the Examiner has asserted.

**D) The Rejections under 35 U.S.C. § 103(a):**

Claims 3-5 were rejected as being unpatentable over Ito in view of Robinson. Claims 3-5 are dependent from independent claim 1. Therefore, Appellant asserts that these claims should be allowed in view of the arguments presented above with respect to claim 1.

## 8. SUMMARY

It is respectfully submitted that the art cited does not render the independent claims of record anticipated and that the claims are patentable over the cited art. Therefore, reversal of the rejections and allowance of the pending claims are respectfully requested.

Respectfully submitted,

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By their Representatives,
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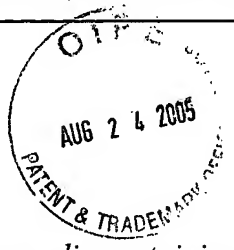
Date 8-22-05

By
Joseph P. Mehrle
Reg. No. 45,535

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop Appeal Brief, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 22 day of August, 2005.

CANDIS BRENDING
Name

Signature




## CLAIMS APPENDIX

*[An appendix containing a copy of the claims involved in the appeal. 37 CFR 41.37(c)(1)(viii). This must include all claims, appealed and allowed.]*

1. (Rejected) A navigational device, comprising:

a processor;

a memory in communication with the processor;

a display in communication with the processor;

wherein the device uses the memory in cooperation with the processor to compress a plurality of coordinate data into reduced sizes and associate at least a portion of activation data with each coordinate data, each coordinate data having three or more dimensions; and

wherein at least a portion of the coordinate data is dynamically communicated to the display.

2. (Rejected) The device of claim 1, further comprising an interface device operable to audibly communicate at least a portion of the coordinate data.

3. (Rejected) The device of claim 1, wherein each dimension includes a delta size associated with an optimal size to compress each coordinate data.

4. (Rejected) The device of claim 3, wherein at least one of the coordinate data exceed the delta size associated with compressing the at least one coordinate data and wherein associating one or more special data ensures the at least one coordinate data are compressed-within the delta size associated with the coordinate data.

5. (Rejected) The device of claim 4, wherein:

each dimension is associated with a direction; and

if each direction within each dimension of each associated coordinate data proceeds in a same direction then using a single sign data for each dimension to compress each coordinate data.

6. (Rejected) The device of claim 1, wherein at least one of the dimensions is associated with attribute data relating to at least one of the other dimensions.

7. (Rejected) The device of claim 1, wherein the device is a handheld portable device.

8. (Rejected) The device of claim 1, wherein the memory is remote from the processor.

9. (Rejected) A navigation system, comprising:

a mass storage device adapted to store navigation data;

a server adapted to communicate with the mass storage; and

a navigation device adapted to communicate with and retrieve navigation data from the server via a communication channel, wherein the navigation device includes a processor in communication with a memory, wherein the processor and memory cooperate to compress at least three dimensional data into reduced sizes, and wherein the at least three dimensional data is associated with the navigation data and activation.

10. (Rejected) The system of claim 9, wherein the communication channel includes a wireless channel.

11. (Rejected) The system of claim 9, wherein the activation data are configurable to activate or deactivate each dimension within the at least three dimensional data of the navigation data.

12. (Rejected) The system of claim 11, wherein the navigation data are compressed within the memory.

13-24. (Canceled).

25. (Rejected) A navigational device, comprising:

a memory;

a display;

a processor that cooperates with the memory to compress navigation data having three or more dimensions wherein the navigation data includes control data and coordinate data; and

a Global Positioning Satellite (GPS) receiver that cooperates with the processor and provides to the processor specific values for coordinate data, wherein the processor matches the values with portions of the compressed navigation data using the control data and dynamically decompresses those matched portions into larger and original sizes and communicates the decompressed matched portions to the display.

26. (Rejected) The navigational device of claim 25, wherein the navigation device is a portable digital assistant.

27. (Rejected) The navigation device of claim 25, wherein the navigation data includes attribute data within one or more of the three or more dimensions, and wherein the attribute data drives presentation effects of the decompressed matched portions on the display.

28. (Rejected) The navigation device of claim 25, wherein the navigational device transmits the decompressed matched portions to an external device.

29. (Rejected) The navigational device of claim 25, wherein each of the three or more dimensions include cartographic data.

30. (Rejected) The navigational device of claim 25, wherein the decompressed match portions represent in least in part a current position of the device within a route that the device is traveling along.

31. (Rejected) The navigational device of claim 25 further comprising an audio device in cooperation with the processor, wherein the audio device communicates at least a part of the decompressed matched portions audibly.

32. (Rejected) The navigational device of claim 25 wherein at least one of the three or more dimensions associated with the decompressed matched portions includes landmark data proximate to the navigational device.

## EVIDENCE APPENDIX

There is none.

## RELATED PROCEEDINGS APPENDIX

There is none.